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## HOTcap® K...H Series Automotive Grade MLCCs Feature Extended Temperature Range to an Industry-High +200 °C

*Radial-Leaded, Through-Hole Devices Are Built for the Most Extreme Automotive Operating Conditions*

### Product Benefits:

- High temperature operation to +200 °C for 500 hours
  - Unlimited operation to +175 °C
- Wide capacitance range from 100 pF to 1 µF
- Low capacitance tolerances as tight as ± 5 %
- AEC-Q200 qualified with PPAP available on request
- Dielectrics:
  - Ultra-stable C0G with a capacitance change of ± 30 ppm/K
  - X0U with TCC of +22 % / -56 % from -55 °C to +175 °C
    - Also fulfills the X7R specification of ± 15 % from -55 °C to +125 °C and the X9V specification of +22 % / -82 % from -55 °C to +200 °C
- Straight or crimped leads with spacing of 2.5 mm and 5.0 mm
- 0.5 mm or 0.6 mm lead wires constructed of 100 % tinned copper-clad steel
- Lead (Pb)-free, RoHS-compliant, and halogen-free



### Market Applications:

- EMI filtering in automotive sensors and DC motors

### The News:

Vishay Intertechnology has extended the operating temperature range of its HOTcap K...H series of Automotive Grade, radial-leaded multilayer ceramic chip capacitors (MLCCs) to +200 °C — the industry's highest for Ceramic Class 2 through-hole devices.

- High reliability MLCC insert produced in a unique wet build process
- Noble metal electrodes
- More robust to mechanical stress and can withstand higher operating temperatures than SMD parts
- Save space by eliminating the need for a PCB
- Lead wires allow for direct welding on lead frames and / or overmolding with plastic
- Coating made of flame-retardant epoxy resin in accordance with UL 94 V-0



## The Key Specifications:

Ceramic class	1			2		
Ceramic dielectric	COG			X0U		
Voltage (VDC)	50	100	200	50	100	200
Min. capacitance (pF)	100	100	100	10,000	10,000	10,000
Max. capacitance (pF)	12,000	12,000	8,200	1,000,000	470,000	180,000

### Availability:

Samples and production quantities of the extended K...H series are available now, with lead times of eight weeks. Sample kits are available from Vishay's catalogue distributors, with the part number HOTC-KIT-KH.

To access the product datasheet on the Vishay Website, go to <http://www.vishay.com/ppg?45211> (K...H Series)

[Check distributor stock of the sample kit on the Vishay website](#)

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